

1. A nucleic acid molecule comprising sequences encoding the pre-membrane and envelope proteins of West Nile virus and the capsid and non-structural proteins of Yellow Fever virus, wherein said pre-membrane or envelope protein comprises an attenuating mutation.
2. The nucleic acid molecule of claim 1, wherein said attenuating mutation comprises an amino acid substitution at a position selected from the group consisting of positions 107, 316, and 440 of the envelope protein.
3. The nucleic acid molecule of claim 2, wherein said amino acid substitution is in position 107.
4. The nucleic acid molecule of claim 2, wherein said amino acid substitution is in position 316 and position 440.
5. The nucleic acid molecule of claim 2, wherein said amino acid substitution is in amino acid positions 107, 316, and 440.
6. The nucleic acid molecule of claim 2, wherein said amino acid substitution at position 107 is leucine to phenylalanine, or a conservative amino acid thereof.
7. The nucleic acid molecule of claim 2, wherein said amino acid substitution at position 316 is alanine to valine, or a conservative amino acid thereof.
8. The nucleic acid molecule of claim 2, wherein said amino acid substitution at position 440 is lysine to arginine, or a conservative amino acid thereof.
9. A chimeric flavivirus encoded by the nucleic acid molecule of claim 1.
10. A method of inducing an immune response to West Nile virus in a subject, said method comprising administering to the subject the chimeric flavivirus of claim 9.

11. The method of claim 10, wherein said subject is at risk of developing, but does not have, West Nile virus infection.

12. The method of claim 10, wherein said subject is infected with West Nile virus.

13. A method of making a chimeric flavivirus vaccine, comprising introducing the nucleic acid molecule of claim 1 into cells.

14. Use of the chimeric flavivirus of claim 9 in vaccination against West Nile virus.